

## NOMENCLATURE OF SOME NEOTROPICAL GELECHIIDAE (LEPIDOPTERA)

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*Abstract.*—Five generic and six specific synonymies are established, and 12 new combinations are made. Neotypes are designated for four names and a lectotype for one name. *Symmetrischema tangolias* (Gyen) is established as the valid name for *S. plaesiosema* (Turner), a pest of potato tubers.

*Key Words:* nomenclature, synonymy, gelechiinae, gelechiid moths, Neotropical Region

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Many species and genera of neotropical Gelechiidae have remained unknown since their publication. Meyrick (1925) treated all taxa proposed to that date and made many nomenclatural decisions. In many instances he did so on the basis of written descriptions; he did not see or make an effort to obtain type specimens beyond those in his collection. Clarke (1969a, b) illustrated the adults and genitalia of type specimens of species of Gelechiidae described by Meyrick and held by the British Museum (Natural History). His work is immensely helpful to gain preliminary, and sometimes final, understanding of a large number of species. Becker (1984) relied mainly on literature, original descriptions and revisions, to associate species with genera and to place genera in higher taxa. Because characters necessary to define species and genera in the Gelechioidea often are in the male and/or female genitalia and the number of taxa in the Neotropical Region is very large, many described taxa are unrecognized, sometimes at the family level. This paper, based on study of several type specimens, clarifies

knowledge of nine generic names and 18 specific names.

Kieffer and Jörgensen (1910) published on plant galls, the primary gall makers, and parasites reared from the gall makers that had been observed and collected in Argentina (primarily in the province of Mendoza). Nearly all the insects were described as "new species" or as "new genus, new species" combinations. Eight of the insects were Lepidoptera, and four were Gelechiidae. The gelechiid adults were sent to Embrik Strand for description (Strand 1911). He provided manuscript names for the moths to Kieffer and Jörgensen, and they attributed the names to Strand in the text of their paper (Kieffer and Jörgensen 1910). However, they presented adequate information about each species to validate the names and thus became the authors of the Strand names. Because they were not intentionally describing new species and/or genera, they may not have had adults in their possession nor labelled specimens as types. Their descriptions are limited to galls and to larvae or pupae when present; no mention is made of

adult characters. It appears that no type material of these four species is extant in Argentina or elsewhere. The homonymous names published by Strand are supported by specimens provided by Kieffer and are highly suitable to serve as material from which neotypes can be designated. Type material of the Strand names is well preserved in the Museum für Naturkunde der Humboldt-Universität, Berlin, East Germany. We borrowed the types of the Strand names, dissected the abdomens, and endeavored to relate their identities to other taxa. The results follow.

1. *Gnorimoschema (Tuta) atriplicella* Kieffer & Jörgensen 1910: 363. (Figs. 1, 6).

The neotype male, present designation, bears the following labels: 1) Argentina/Mendoza/Kieffer G. 2) male genitalia/slide 5109/R W Hodges. 3) Neotype by Hodges & Becker 1989.

*Gnorimoschema (Tuta) atriplicella* is a valid species of *Phthorimaea* Meyrick, NEW COMBINATION; and it is the type species of *Tuta* Kieffer & Jörgensen. Thus, *Tuta* is a junior synonym of *Phthorimaea*, NEW SYNONYMY; and it is removed from the synonymy of *Gnorimoschema* Busck where Meyrick (1925: 89) had placed it. The moth (Fig. 1) is indistinct, as are most *Phthorimaea*, and has pale yellow-brown forewings and pale straw-yellow hindwings. The male genitalia are as illustrated (Fig. 6).

2. *Tecia mendozella* Kieffer & Jörgensen 1910: 375. (Figs. 2, 7).

The neotype male, present designation, bears the following labels: 1) Argentina/Mendoza/Kieffer G. 2) male genitalia/slide 5107/R W Hodges. 3) Neotype by Hodges & Becker 1989.

*Tecia mendozella* is a junior synonym of *Topeutis venosa* Butler, NEW SYNONYMY; and it is the type species of *Tecia* Kieffer & Jörgensen. *Topeutis venosa* Butler is the type species of *Orsotricha* Meyrick,

which thus becomes a junior synonym of *Tecia*, NEW SYNONYMY; and *Tecia venosa* (Butler) is a NEW COMBINATION.

3. *Fapua albinervella* Kieffer & Jörgensen 1910: 378. (Figs. 3, 8).

The neotype male, present designation, bears the following labels: 1) Argentinien/Prov. Mendoza/Kieffer G. 2) male genitalia/slide 5108/R W Hodges. 3) Neotype by Hodges & Becker 1989.

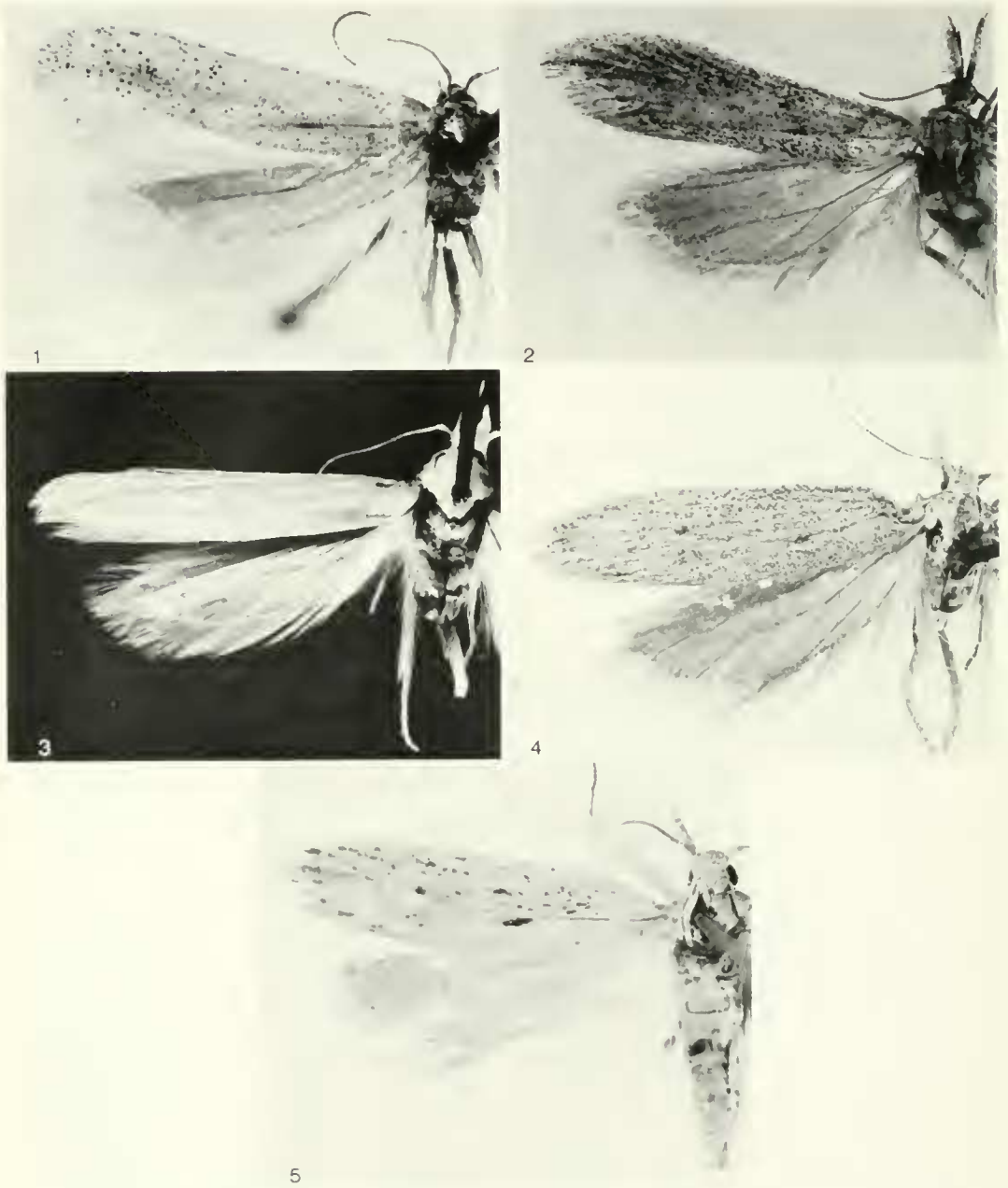
*Fapua albinervella* is a valid species of *Tecia*, and it is the type species of *Fapua* Kieffer & Jörgensen. Thus, we confirm Meyrick's (1925: 89) placement of the species and treatment of *Fapua* as a junior synonym of *Tecia*. The wing pattern of the moth (Fig. 3) superficially resembles that of a species of *Coleophora* Hübner (Coleophoridae). The forewings are pale yellow orange with white on the veins; the hindwings are pale yellow with a pale-orange fringe.

4. *Tecia (Lata) kiefferi* Kieffer & Jörgensen 1910: 398. (Figs. 4, 9).

The neotype male, present designation, bears the following labels: 1) Argentinien/Prov. Mendoza/Kieffer G. 2) male genitalia/slide 5110/R W Hodges. 3) Neotype by Hodges & Becker 1989.

*Tecia (Lata) kiefferi* is a valid species of *Tecia*, and it is the type species of *Lata* Kieffer & Jörgensen. Thus, we confirm Meyrick's (1925: 89) placement of the species and treatment of *Lata* as a junior synonym of *Tecia*. The moth (Fig. 4) is similar to *Tecia venosa* (Butler); however, in the male genitalia (Fig. 9) the anteromesial margin of the tegumen is straight in *kiefferi*; it is rounded in *venosa* (Fig. 2).

Another hitherto unrecognized, monotypic genus is *Brachypsaltis* Meyrick with type species *subalbata* Meyrick. The holotype male of *subalbata* (Fig. 5) was borrowed from the Naturhistorisches Museum, Vienna, and the genitalia were dissected. *B. subalbata* proves to be a valid species of



Figs. 1-5. Wings of Gelechiidae species. 1, *Phthorimaea atriplicella* (Kieffer & Jörgensen), neotype, m, Argentina. 2, *Tecia venosa* (Butler), [neotype of *Tecia mendozella* (Kieffer & Jörgensen)], m, Argentina. 3, *Tecia albinervella* (Kieffer & Jörgensen), neotype, m, Argentina. 4, *Tecia kiefferi* (Kieffer & Jörgensen), neotype, m, Argentina. 5, *Tecia subalbata* (Meyrick), holotype, m, Argentina.

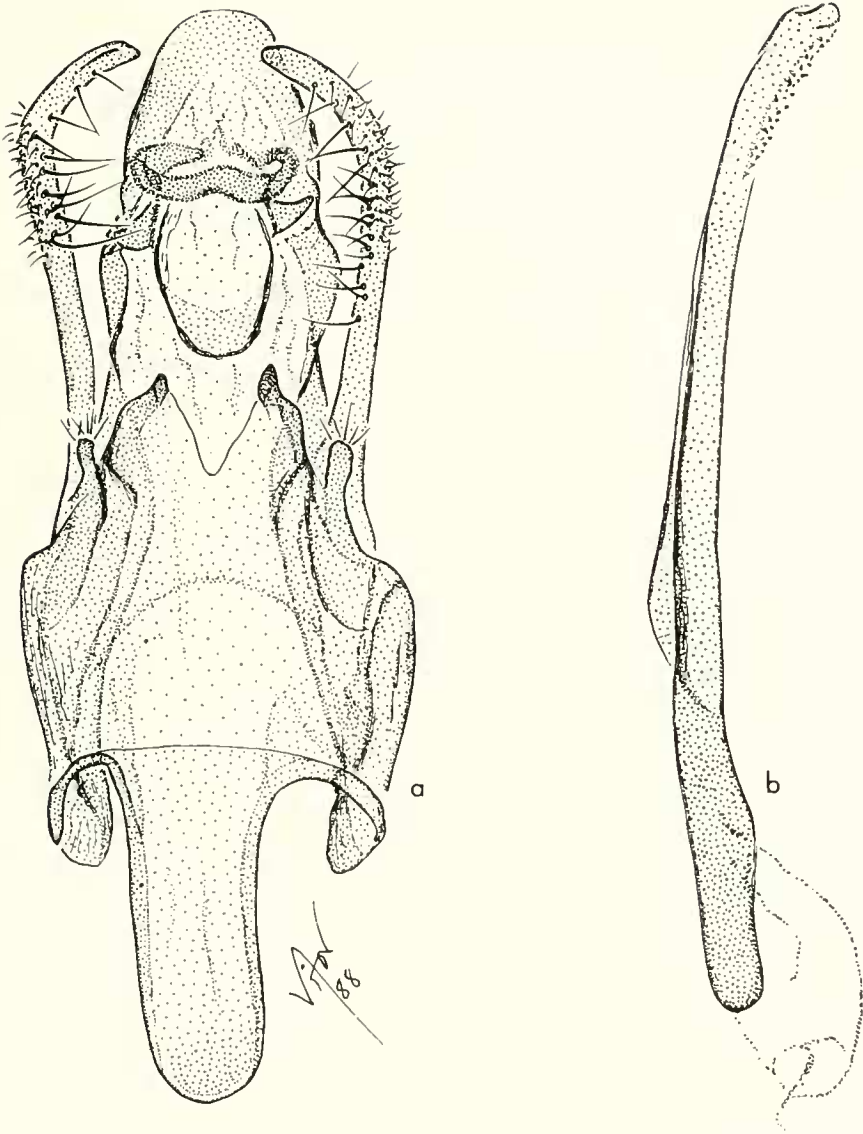


Fig. 6. *Phthorimaea atriplicella* (Kieffer & Jörgensen), neotype, m, Argentina. a, genitalia with aedeagus removed (ventral aspect). b, aedeagus.

*Tecia* and is transferred to that genus as *Tecia subalbata* (Meyrick), NEW COMBINATION. Thus, *Brachypsaltis* becomes a junior synonym of *Tecia*, NEW SYNONYMY. The male genitalia are as illustrated (Fig. 10).

Becker borrowed eight syntypes of *Holcocera baccharisella* Brèthes from the Mu-

seo Argentino de Ciencias Naturales "Bernardino Rivadavia," Buenos Aires. Brèthes did not indicate the provenance nor the number of specimens he had when he described *baccharisella*. The syntypes bear the same labels: 1) Bs Aires/iv.1916/J.B. 2) *Holcocera baccharisella* Br. We designate a male as lectotype and have added a third

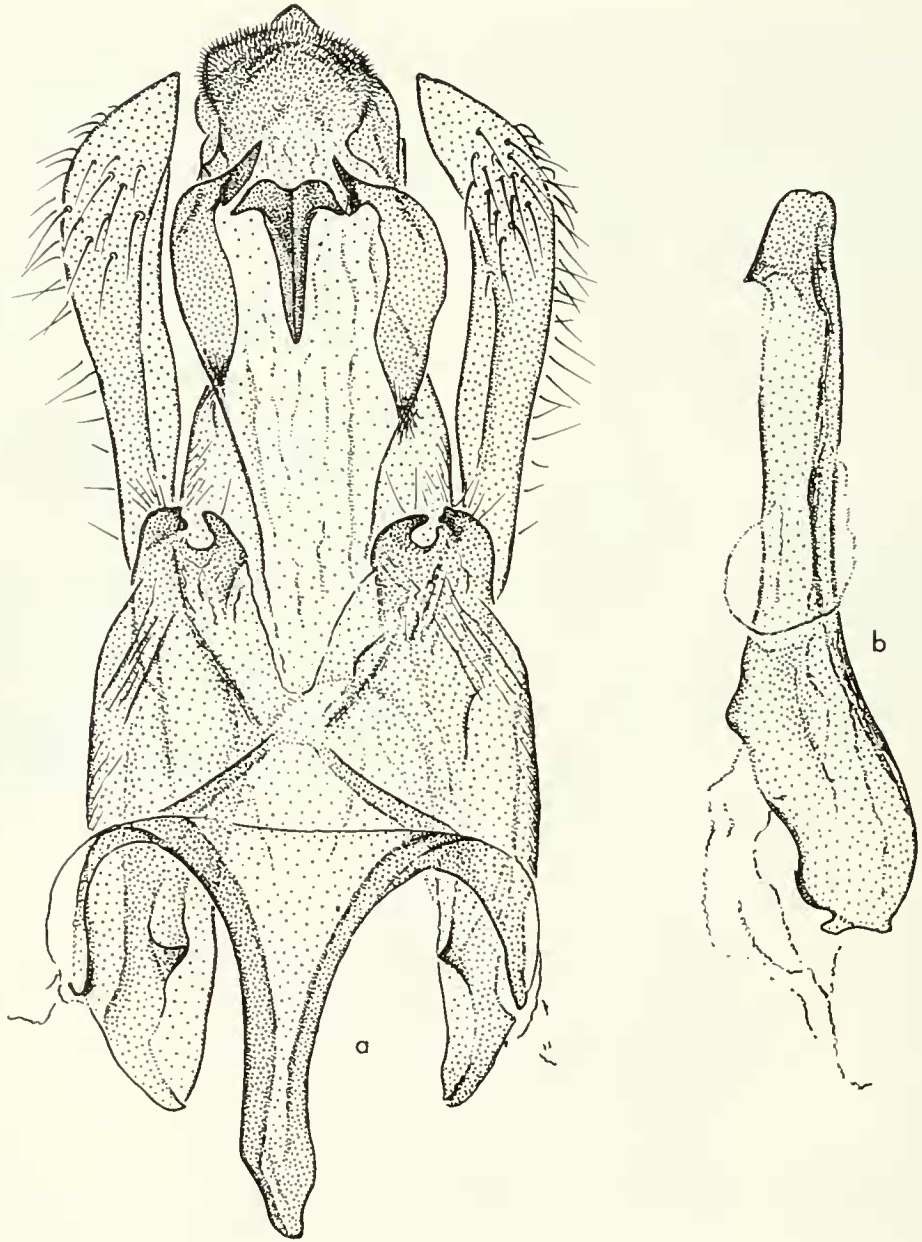


Fig. 7. *Tecia venosa* (Butler), [neotype of *Tecia mendozella* (Kieffer & Jörgensen)], m, Argentina. a, genitalia with aedeagus removed (ventral aspect). b, aedeagus.

label, Lectotype by Hodges & Becker 1989, to it. Paralectotype labels were added to the remaining seven specimens. Study of the male genitalia of *baccharisella* shows it to be a junior synonym of *Topeutis venosa* But-

ler, NEW SYNONYMY. It is thus transferred to *Tecia* as *Tecia baccharisella* (Brèthes), NEW COMBINATION.

Povolný (1980) described *Scrobipalpo-*  
*sis* (*Scrobischema*) *vergarai* on the basis of

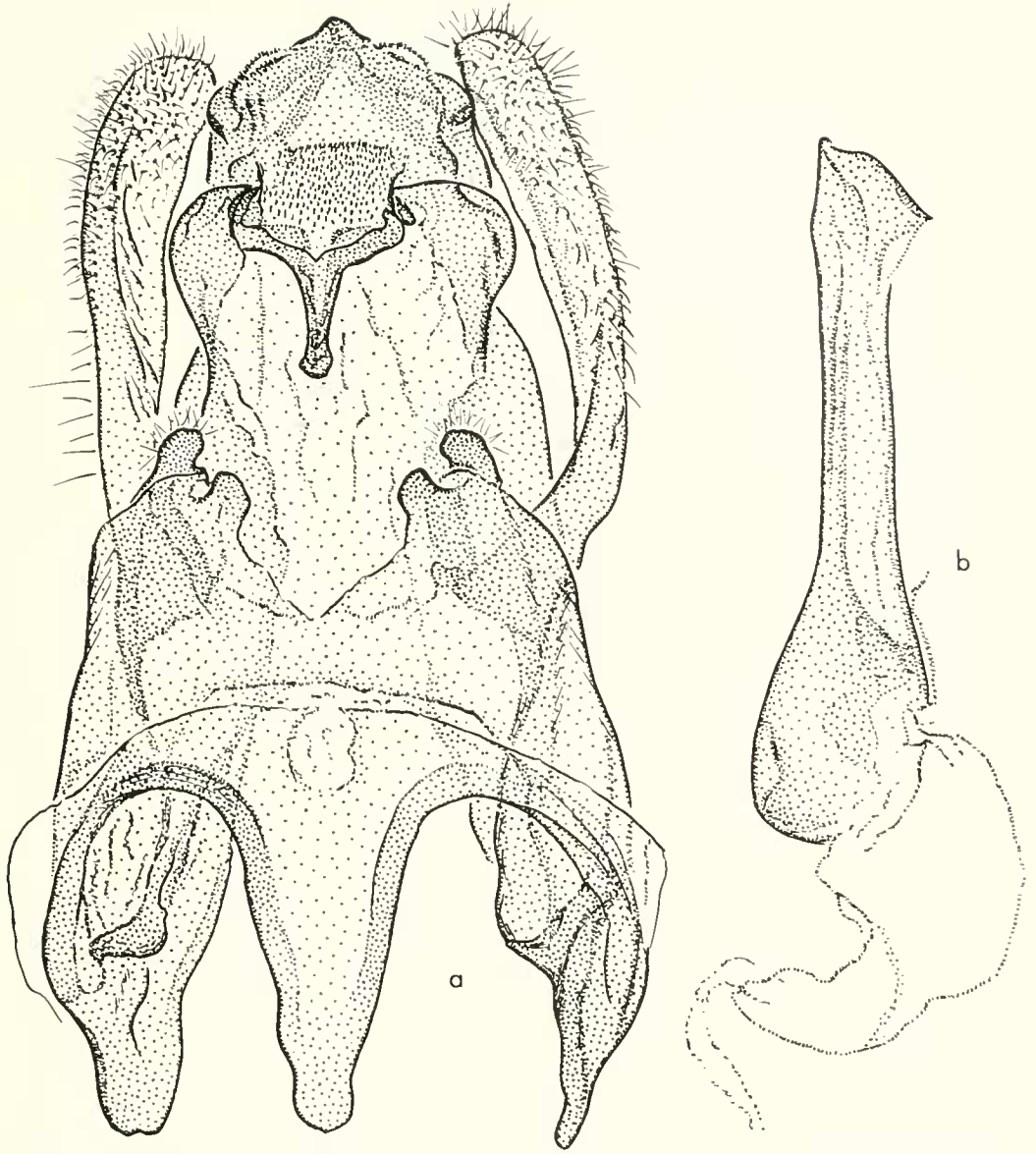


Fig. 8. *Tecia albinervella* (Kieffer & Jörgensen), neotype, m, Argentina. a, genitalia with aedeagus removed (ventral aspect). b, aedeagus.

adults reared from larvae that caused "... hyperplastic deformation of the terminal shoots of *Baccharis macrantha* HBK." *Tecia venosa* is a gall maker on *Baccharis serulata* Pers. (Kieffer & Jörgensen 1910: 375). Study of Povolný's illustrations and discussion convince us that *S. vergarai* is a junior

synonym of *T. venosa*, NEW SYNONYMY. Further, because *vergarai* is type species of *Scrobischema* Povolný, the latter is a junior synonym of *Tecia*, NEW SYNONYMY; and *Tecia vergarai* Povolný is a NEW COMBINATION.

Study of the male and female genitalia of

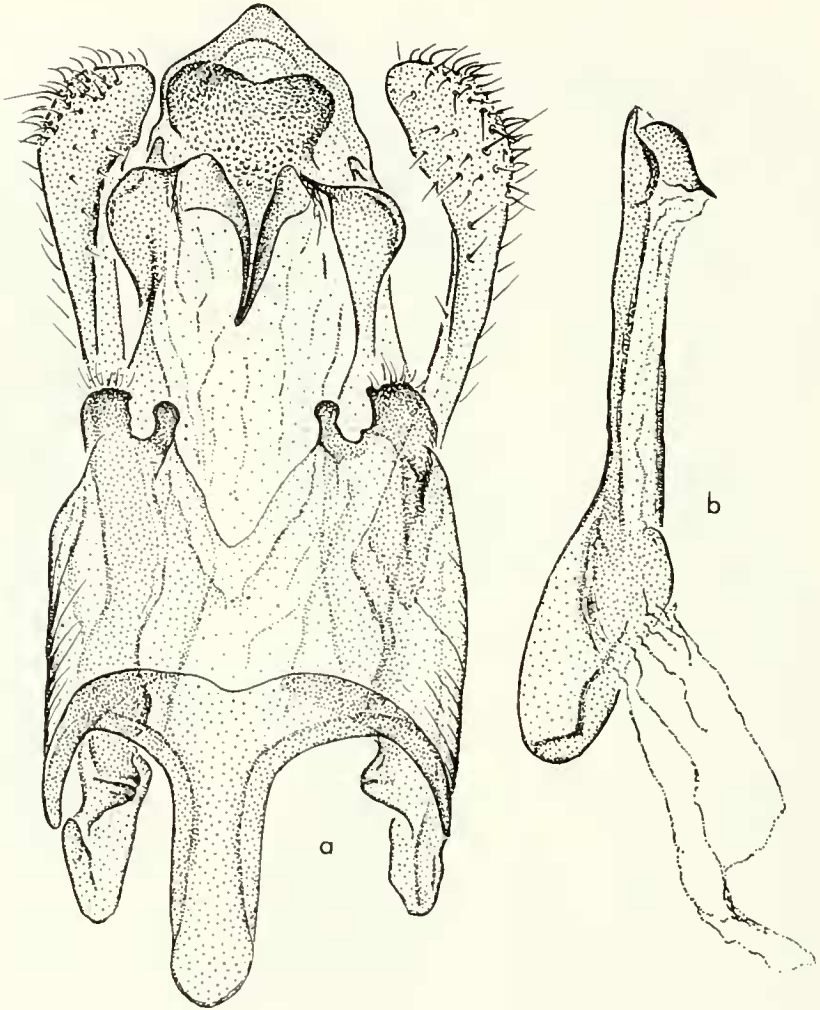


Fig. 9. *Tectia kiefferi* (Kieffer & Jörgensen), neotype, m, Argentina. a, genitalia with aedeagus removed (ventral aspect). b, aedeagus.

*Gelechia petasitis* Pfaffenzeller, the type species of *Scrobipalopsis* Povolný, lead us to the conclusion that *Scrobipalopsis* is a junior synonym of *Tectia*, NEW SYNONYMY, and that *Gnorimoschema tetradymella* Busck, *Gnorimoschema petrella* Busck, *Gnorimoschema arnicella* Clarke, "*Scrobipalopsis*" *chili* Povolný, and *Scrobipalopsis solanivora* Povolný are NEW COMBINATIONS in *Tectia*.

Hodges (1983: 22) erred in making *Scro-*

*bipalopsis* a junior synonym of *Ptycerata* Ely. He used a very similar, but incorrectly identified, specimen for his concept of *Ptycerata busckella* Ely, the type species of *Ptycerata*. The genitalia of the holotype of *Ptycerata busckella* Ely show that it is related to *Monochroa* Heinemann and *Isophrictis* Meyrick, not to *Gnorimoschema* Busck and allies.

*Scrobipalpa* Janse, with type species *Gelechia heliopa* Lower, is also very similar to

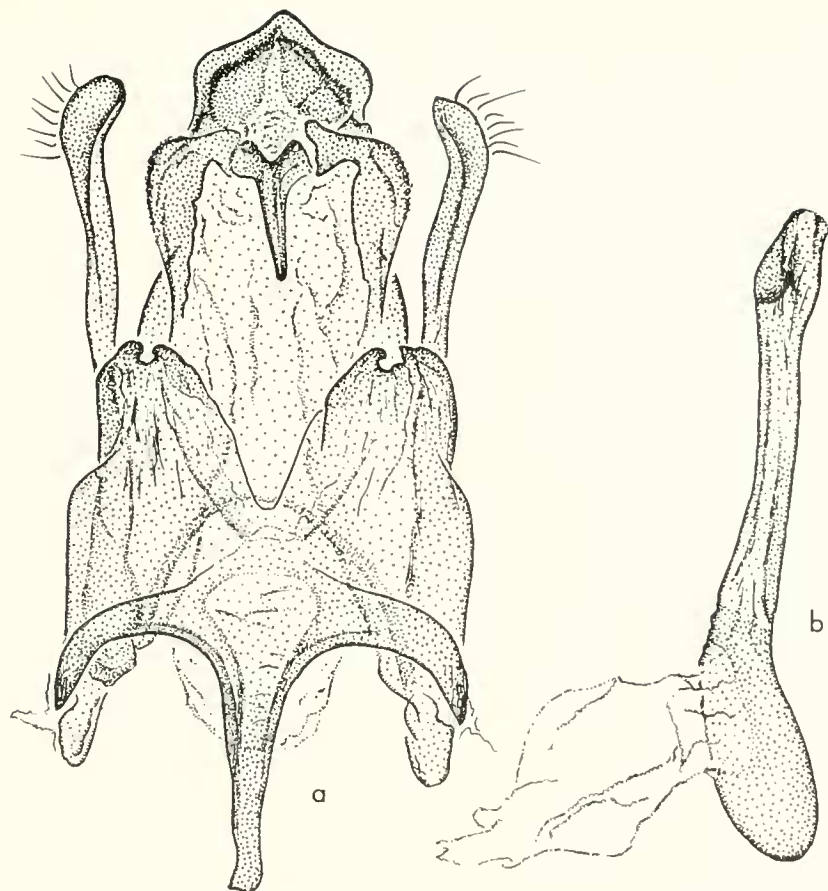


Fig. 10. *Tecia subalbata* (Meyrick), holotype, m, Argentina. a, genitalia with aedeagus removed (ventral aspect). b, aedeagus.

*Tecia*. We do not propose to synonymize *Scrobipalpa* with *Tecia* at this time; however, we draw attention to the similarity.

*Trichotaphe tangolias* Gyen has remained in *Trichotaphe* Clemens (Becker 1984: 51), which is a junior synonym of *Dichomeris* Hübner (Hodges 1986: 10), because no type material has been recognized subsequent to the original description. In the U.S. National Museum of Natural History we found a microscope slide with the left wings of *Gelechia* (*Trichotaphe*) *tangolias* Gyen made by Busck in 1916 from a specimen received from Prof. Silva Figueroa of Chile. The forewing definitely is that of *Symmetrischema*

*plaesiosema* (Turner). Gyen's paper (1913) indicates that he received the specimens on which the description was based from C. Silva Figueroa. A few pages further on, in the same publication, Silva (1913) published on the life history of *T. tangolias*, illustrating the immature stages on potato. Silva (1915) published a short note and illustrated the adult, pupa, and larva of *Trichotaphe tangolias*. The illustration of the adult is a crude representation of *S. plaesiosema*. On the basis of the original description, the pair of wings received from Silva, the host, and the illustration by Silva, we conclude that *Trichotaphe tangolias*



Gyen is a senior synonym of *Symmetrischema plaesiosema* (Turner), NEW SYNONYMY, and is a species of *Symmetrischema* Povolný [*Symmetrischema tangolias* (Gyen), NEW COMBINATION].

#### NOMENCLATURE SUMMARY

### GELECHIIDAE

#### Gelechiinae

Phthorimaea Meyrick 1902

*Tuta* Kieffer & Jörgensen 1910, n. syn.

[from *Gnorimoschema*]

*atriplicella* (Kieffer & Jörgensen 1910), n. comb.

[from *Gnorimoschema*]

*Symmetrischema* Povolný 1967

*tangolias* (Gyen 1913), n. comb.

[from *Trichotaphe*]

*plaesiosema* (Turner 1919), n. syn.

*melanoplintha* (Meyrick 1926), n. syn.

*tuberosella* (Busck 1931), n. syn.

*Tecia* Kieffer & Jörgensen 1910

*Fapua* Kieffer & Jörgensen 1910

*Lata* Kieffer & Jörgensen 1910

*Orsotricha* Meyrick 1914, n. syn.

*Brachypsaltis* Meyrick 1931, n. syn.

*Scrobipalopsis* Povolný 1967, n. syn.

[from *Ptycerata*]

*Scrobischema* Povolný 1980, n. syn.

*albinervella* (Kieffer & Jörgensen 1910)

*arnicella* (Clarke 1942), n. comb.

[from *Ptycerata*]

*chili* (Povolný 1967), n. comb.

[from *Ptycerata*]

*kiefferi* (Kieffer & Jörgensen 1910)

*petasitis* (Pfaffenzeller 1867), n. comb.

[from *Scrobipalopsis*]

*petrella* (Busck 1915), n. comb.

[from *Ptycerata*]

*solanivora* (Povolný 1973), n. comb.

[from *Ptycerata*]

*subalbata* (Meyrick 1931), n. comb.

[from *Brachypsaltis*]

*tetradymiella* (Busck 1903), n. comb.

[from *Ptycerata*]

*venosa* (Butler 1883), n. comb.

[from *Orsotricha*]

*mendozella* (Kieffer & Jörgensen 1910), n. syn.

*baccharisella* (Brèthes 1917), n. syn., n. comb.

[from *Holococera*, *Blastobasidae*]

*vergarai* (Povolný 1980), n. syn., n. comb.

[from *Scrobischema*]

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